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Sponge grafting in the  
orbit for support of  
artificial eye.





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**SPONGE GRAFTING IN THE ORBIT FOR  
SUPPORT OF ARTIFICIAL EYE.<sup>1</sup>**

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To a skilled oculist, the ordinary enucleation of an eyeball is one of the simplest operations he is called upon to perform, and yet there are some cases in which so much of the conjunctiva is destroyed by careless or ignorant operators, that it is impossible for an artificial eye to be worn afterward. This is very annoying to a patient, and we cannot blame him if he never forgives the doctor who has so afflicted him. Such cases emphasize the fact that it is the duty of the surgeon not only to operate skilfully for the immediate relief desired, but he should do everything in his power to prevent disfigurement, and when an organ or limb cannot be restored to usefulness, he should at least obtain the best cosmetic results possible. After an eyeball has been removed, and an artificial eye inserted, very frequently it is not as prominent as the good eye. It has a *sunken appearance*, which attracts attention at once to the fact that the eye is artificial. To remedy this defect has been a problem for ophthalmologists for years.

One of the most satisfactory operations heretofore practised is that known as Mule's operation, which consists in the evisceration of the contents of the eye, and the insertion of a hollow glass

<sup>1</sup> Read before the Medical Society of the District of Columbia, June 3, 1896.



globe in the sclerotic, which is sewed in. This proved fairly satisfactory, but there is some danger of the globe being broken, and occasionally the stitches come out and the globe escapes. There is also the risk of sympathetic ophthalmia where the entire eyeball is not removed. To obviate these difficulties and at the same time secure a full orbit, I have devised a method of sponge grafting which seems to meet the requirements without the disadvantages of other methods.

The operation is a simple one, and is performed as follows: The eyeball is removed by the ordinary method under strict asepsis. After all hemorrhage is arrested, the socket is washed out with formalin solution, 1-1000, followed by sterilized salt solution. A globe of fine, soft, sponge about three-fourths the size of the eyeball (previously sterilized in five per cent. formalin solution and rinsed in the salt solution), is then inserted into the socket, or capsule of tenon. The conjunctiva is brought together and sewed with rat-tail sutures. The eyelids are then closed with compress and bandage. In a few weeks the sponge is filled with new tissue, which in time becomes firm, solid flesh, making a full orbit and a fine support for the artificial eye. The sponge fibers are apparently absorbed.

I have performed this operation in five cases with fairly good results in all, but union of the conjunctiva has not been firm enough to prevent some of the stitches from breaking or cutting out and the wound gaping. In future

cases, to relieve this strain on the conjunctiva and to obtain good motion of the eye, I think of uniting the opposing recti muscles with rat-tail sutures, and then the conjunctiva over that by the purse-string or subcutaneous suture. By this method we should get union by first intention, good motion of the stump, and a full orbit. There seems to be no danger from infection of the sponge, for in two cases the eye was removed for panophthalmitis. Not only has this operation advantages over other methods in recent cases, but in old cases in which the eye was removed months or years ago, when there is this sunken appearance of the artificial eye, the socket might be reopened and a sponge inserted.

Since making my investigations, I find that Professor D. J. Hamilton of Edinburgh, practised sponge grafting for old ulcers in 1880, since which time a few other physicians have tried it in fresh wounds, and some other similar conditions that skin-grafting had been used in. However, I cannot find in all the medical literature in the library of the surgeon-general's office any mention of sponge being used as I have suggested and tried.







